Preface

The *Annual Energy Outlook 2005* (*AEO2005*) presents midterm forecasts of energy supply, demand, and prices through 2025 prepared by the Energy Information Administration (EIA). The projections are based on results from EIA's National Energy Modeling System (NEMS).

The report begins with an "Overview" summarizing the *AEO2005* reference case. The next section, "Legislation and Regulations," discusses evolving legislation and regulatory issues, including legislation and regulations that have been enacted and some that are proposed. Next, the "Issues in Focus" section discusses key energy market issues and examines their potential impacts. In particular, it includes a discussion of the world oil price assumptions used in the reference case and four alternative world oil price cases examined in *AEO2005*. "Issues in Focus" is followed by "Market Trends," which provides a summary of energy market trends in the *AEO2005* forecast.

The analysis in *AEO2005* focuses primarily on a reference case, lower and higher economic growth cases, and four alternative oil price cases—a low world oil price case, an October oil futures case, and two high world oil price cases. Forecast tables for those cases are provided in Appendixes A through D. The major results for the alternative cases, which explore the impacts of varying key assumption in NEMS (such as rates of technology penetration), are summarized in Appendix E. Appendix F briefly describes NEMS and the alternative cases.

The *AEO2005* projections are based on Federal, State, and local laws and regulations in effect on or before October 31, 2004. The potential impacts of pending or proposed legislation, regulations, and standards (and sections of existing legislation requiring funds that have not been appropriated) are not reflected in the projections. For example, the *AEO2005* forecast does not include the potential impacts of regulations proposed by the U.S. Environmental Protection Agency, such as the Clean Air Interstate Rule and the Clean Air Mercury Rule, that would address emissions from coal-fired power plants in the United States. In general, the historical data used for *AEO2005* projections are based on EIA's *Annual Energy Review 2003*, published in September 2004; however, data are taken from multiple sources. In some cases, only partial or preliminary 2003 data were available. Historical data are presented in this report for comparative purposes; documents referenced in the source notes should be consulted for official data values. The projections for 2004 and 2005 incorporate the short-term projections from EIA's September 2004 *Short-Term Energy Outlook*.

Federal, State, and local governments, trade associations, and other planners and decisionmakers in the public and private sectors use the *AEO2005* projections. They are published in accordance with Section 205c of the Department of Energy Organization Act of 1977 (Public Law 95-91), which requires the EIA Administrator to prepare annual reports on trends and projections for energy use and supply.

The projections in the *Annual Energy Outlook 2005* are not statements of what will happen but of what might happen, given the assumptions and methodologies used. The projections are business-as-usual trend forecasts, given known technology, technological and demographic trends, and current laws and regulations. Thus, they provide a policy-neutral reference case that can be used to analyze policy initiatives. EIA does not propose, advocate, or speculate on future legislative and regulatory changes. All laws are assumed to remain as currently enacted; however, the impacts of emerging regulatory changes, when defined, are reflected.

Because energy markets are complex, models are simplified representations of energy production and consumption, regulations, and producer and consumer behavior. Projections are highly dependent on the data, methodologies, model structures, and assumptions used in their development. Behavioral characteristics are indicative of real-world tendencies rather than representations of specific outcomes.

Energy market projections are subject to much uncertainty. Many of the events that shape energy markets are random and cannot be anticipated, including severe weather, political disruptions, strikes, and technological breakthroughs. In addition, future developments in technologies, demographics, and resources cannot be foreseen with any degree of precision. Many key uncertainties in the *AEO2005* projections are addressed through alternative cases.

EIA has endeavored to make these projections as objective, reliable, and useful as possible; however, they should serve as an adjunct to, not a substitute for, a complete and focused analysis of public policy initiatives.